

What is claimed is:

1. A labor contraction sensing device comprising:
a fiber optic strain sensor;
a signal transmitter in communication with said fiber optic strain sensor; and
wherein, said fiber optic strain sensor generates an output signal in response to labor contractions and communicates the output signal to said signal transmitter, said signal transmitter is operable to receive the output signal and communicate the output signal to monitor labor contractions.
2. The labor contraction sensing device claimed in Claim 1, wherein said fiber optic strain sensor has an adhesive surface.
3. The labor contraction sensing device claimed in Claim 1, wherein said fiber optic strain sensor comprises:
at least one fiber optic cable, said fiber optic cable having a first and second end;
a light source positioned adjacent to said first end of said fiber optic cable;
a light detector positioned adjacent to said second end of said fiber optic cable;
wherein, said light source transmits a light beam through said fiber optic cable and said light detector operable to identify the application of force against said fiber optic cable.
4. The labor contraction sensing device claimed in Claim 3, wherein said fiber optic cable is embedded in a sensor cover.
5. The labor contraction sensing device claimed in Claim 4, wherein said sensor cover comprises a flexible material.
6. The labor contraction sensing device claimed in Claim 5, wherein said flexible material is a plastic.
7. The labor contraction sensing device claimed in Claim 1, further including an electronics box, said signal transmitter is housed in said electronics box.
8. The labor contraction sensing device claimed in Claim 7, wherein said electronics box has an adhesive surface.

9. The labor contraction sensing device claimed in Claim 1, further including a sensor jacket, said sensor jacket defining a pouch in which said fiber optic strain sensor is positioned.

10. The labor contraction sensing device claimed in Claim 9, wherein said sensor jacket has an adhesive surface.

11. The labor contraction sensing device claimed in Claim 3, further including a signal decoder in communication with said light detector.

12. The labor contraction sensing device claimed in Claim 1, wherein at least a portion of said fiber optic strain sensor is attached to an adhesive material.

13. The labor contraction sensing device claimed in Claim 12, wherein said adhesive material is a mesh fabric having an adhesive surface.

14. A labor contraction sensing device comprising:
a fiber optic strain sensor, said fiber optic strain sensor comprising at least one fiber optic cable, a light source located adjacent to said first end of said fiber optic cable, and a light detector located adjacent to said second end of said fiber optic cable;
a signal transceiver in communication with said light detector; and
wherein, said light detector is operable to communicate an output signal to said signal transceiver in response to the application of external force upon said fiber optic cable; said signal transceiver is operable to receive the output signal and communicate the output signal to monitor labor contractions.

15. The labor contraction sensing device claimed in Claim 14, wherein said signal transceiver is a radio transmitter.

16. The labor contraction sensing device claimed in Claim 14, wherein said fiber optic strain sensor includes an adhesive outer surface.

17. The labor contraction sensing device claimed in Claim 14, further including an adhesive material attached to at least a portion of said fiber optic strain sensor.

18. The labor contraction sensing device claimed in Claim 14, further including a sensor jacket, said sensor jacket defining a space in which said fiber optic strain sensor is positioned.

19. The labor contraction sensing device claimed in Claim 18, wherein said signal transceiver is positioned substantially adjacent to said sensor jacket.

20. The labor contraction sensing device claimed in Claim 14, further including a signal line connecting said fiber optic strain sensor with said signal transceiver.

21. The labor contraction sensing device claimed in Claim 18, wherein said fiber optic cable is embedded in a sensor cover.

22. The labor contraction sensing device claimed in Claim 19, wherein said sensor cover comprises a flexible material.

23. The labor contraction sensing device claimed in Claim 22, wherein at least a portion of said flexible material is plastic.

24. The labor contraction sensing device claimed in Claim 21, wherein said sensor cover has an adhesive surface.

25. A labor contraction sensing device comprising:
a fiber optic strain sensor, said fiber optic strain sensor comprising at least one fiber optic cable, said fiber optic cable having a first and second end, a light source located adjacent to said first end of said fiber optic cable, and a light detector located adjacent to said second end of said fiber optic cable;
a signal decoder in communication with said light detector;
a signal transceiver in communication with said signal decoder, said signal transceiver including a signal receiver and signal transmitter; and

wherein, said signal decoder is operable to communicate an output signal to said signal transceiver in response to the application of force against said fiber optic cable, said signal transceiver is operable to communicate the output signal to monitor labor contractions.

26. The labor contraction sensing device claimed in Claim 25, wherein said signal transceiver is a radio transmitter.

27. The labor contraction sensing device claimed in Claim 26, wherein said signal transceiver further includes a signal receiver.

28. The labor contraction sensing device claimed in Claim 25, further including a flexible drape overlying said fiber optic strain sensor.

29. The labor contraction sensing device claimed in Claim 28, wherein said flexible drape has an adhesive surface.

30. The labor contraction sensing device claimed in Claim 28, wherein at least a portion of said flexible drape is made of a polymer sheet.

31. The labor contraction sensing device claimed in Claim 25, further including a sensor jacket, said sensor jacket defining a space in which at least a portion of said fiber optic strain sensor is positioned.

32. The labor contraction sensing device claimed in Claim 31, wherein said sensor jacket has an adhesive surface.

33. The labor contraction sensing device claimed in Claim 25, further including an adhesive material attached to at least a portion of said fiber optic strain sensor.

34. A labor contraction sensing device comprising:
- an optical strain sensor;
 - a radio transmitter in communication with said optical strain sensor; and
 - an adhesive material connected to at least a portion of said optical strain sensor, said adhesive material adapted to adhere to the surface of an abdomen.